REMARKS

Introduction

Claims 11, 20, 23, 24, 36, 38, 54-58, and 60-67 remain pending in the present application. In this Response, claims 11, 23, 54, 62, 64, 66, and 67 have been amended and dependent claim 59 has been cancelled. No new matter has been added. Exemplary support for the claim amendments can be found throughout the claims and specification as originally filed. See, for example, cancelled claim 59 and pages 11-12 of the present specification.

Applicants respectfully request the Examiner to reconsider and withdraw the outstanding rejections at least in view of the above amendments and the following remarks.

Rejection under 35 U.S.C. § 112

Claims 11, 20, 23, 24, 36, 38, and 54-67 have been rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. In particular, it is the Examiner's position that the specification does not support the added limitation "depositing a vacuum deposited metal on at least a portion of the cured compound" as now recited in claims 11, 64, and 66. (Final Office Action dated January 20, 2011, Page 5). Merely to expedite prosecution and without conceding the propriety of the Examiner's rejection, independent claims 11, 64, and 66 have been amended to replace "depositing a vacuum deposited metal pigment ink on at least a portion of the cured compound" with "printing metallic ink containing vacuum deposited metal pigment particles on at least a portion of the cured compound". As provided hereinabove, the foregoing amendment is fully supported at least at pages 11-12 of the present specification.

Further, the Examiner's attention is respectfully directed to M.P.E.P. § 2163 which provides that if a skilled artisan would have understood the inventor to be in possession of the claimed invention at the time of filing, even if every nuance of the claims is not explicitly described in the specification, then the adequate description requirement is met. See, *e.g.*, *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991); *Martin v. Johnson*, 454 F.2d 746, 751, 172 USPQ 391, 395 (CCPA 1972) (stating "the description need not be in *ipsis verbis* [*i.e.*, "in the same words"] to be sufficient"). Thus, it is not necessary for each claimed feature to be described *ipsis verbis* in the present specification.

In view of at least the above, it is respectfully submitted that the rejection of the claims under 35 U.S.C. § 112, first paragraph, should be withdrawn.

Rejection under 35 U.S.C. § 103

Claims 11, 20, 23, 24, 36, 38, and 53-67 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 4,933,120 (hereinafter "D'Amato") in view of U.S. Patent No. 5,981,040 (hereinafter "Rich"). This rejection is respectfully traversed.

Legal Standard

It should be noted that the Office has the initial burden of establishing a factual basis to support the legal conclusion of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). For rejections under 35 U.S.C. § 103(a) based upon a combination of prior art elements, in *KSR Int'l v. Teleflex Inc.*, 127 S.Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007), the Supreme Court stated that a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). Moreover, all words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Pending Claims

Each of independent claims 11, 64, and 66 recite, *inter alia*, printing a metallic ink containing vacuum deposited metal pigment particles on at least a portion of the cured compound.

Cited Art

D'Amato is directed to a method of treating sheet material of a given area, comprising the steps of: printing a visual pattern on at least one side of said sheet material, providing a transfer surface containing at least one physically defined area of a discrete surface relief light diffraction pattern that is significantly less than the sheet material given area, applying

casting resin in liquid form to said at least one discrete pattern area in a manner to substantially avoid coating any other areas of said transfer surface, contacting said at least one side of said sheet material with said resin coated discrete pattern area, thereby to contact said sheet material with said resin in a discrete area corresponding to the discrete pattern area of the transfer surface, said contacting step occurring sometime after the printing step, directing actinic radiation to said resin in a manner to harden said resin and cause it to adhere to said sheet material while being held against the sheet material by the transfer surface relief pattern without movement therebetween, separating said transfer sheet discrete pattern area from the hardened resin, thereby to leave the hardened resin in place on said sheet material with the surface relief pattern contained therein, and coating substantially only the hardened resin in said discrete area with a reflective material in a manner to follow the surface relief pattern, whereby said sheet material is treated with both conventional printing and a light diffraction pattern. (Claim 1).

Rich discusses a holographic image produced by the impression of a shim onto a metallic ink coating comprising a plurality of metallic particles suspended in a resinous ink binder. A resinous or substantially tactile and nonresilient undercoat can be applied to the substrate also to receive the impression of the shim and to create more distinct holographic imagery. A substantially clear overcoat can also be applied over the metallic ink coating to enhance the reflectivity of the image. (Abstract).

Differences between Pending Claims and Cited Art

The Examiner has taken the position that "while D'Amato et al. does not clearly teach the use of metallic ink, Rich et al. is cited to show the conventional use of metallic ink which is deposited…on a substrate". (Final Office Action dated January 20, 2011, Page 5).

Referring to the Examiner's argument of "attacking references individually" at page 5 of the Final Office Action dated January 20, 2011, it should be noted that as the Examiner has conceded at least the above-identified deficiency of D'Amato, Rich is addressed hereinbelow to show that Rich indeed fails to cure D'Amato's above-conceded deficiency. Thus, it should be understood by the Examiner that the references are not being attacked individually. It is simply being established hereinbelow that the combination of D'Amato and Rich fails to disclose or suggest each and every presently recited feature.

With regard to Rich, it should be noted that Rich teaches that "the brightness of

metallic ink 16 increases when it is impressed by a shim to create a holographic image" and that it "is believed that flat particles, when pressed upon by a shim, are caused to align better along a plane than rounder and more amorphous particles" and the "flatter particles more readily form a continuous plane…and therefore also create a more reflective surface when impressed to create a holographic image". (See Col. 3, lines 45-54 of Rich). The foregoing excerpt from Rich is one of many descriptions in Rich pertaining to the use of a shim to impress metallic ink to form a holographic image. As explained in detail in the Response submitted on October 29, 2010, the use of the shim to impress metallic ink refers to an embossing process which is clearly detailed to be different from a printing process.

The above excerpt from Rich shows that embossing methods (not printing methods) were contemplated to achieve the goals and advantages detailed in Rich.

While it is indeed true that Rich teaches embossing of metallic ink, the fact that Rich teaches "embossing" the metallic ink versus "printing" the metallic ink, as presently recited, cannot be ignored. If portions of Rich (*i.e.*, embossing) are ignored by the Examiner in an effort to improperly combine Rich with D'Amato, there are several issues that should be addressed by the Examiner in an effort to clarify the record.

First, is the Examiner relying only on selective teachings of Rich? Based on the Examiner's position on the record, the answer to the foregoing question appears to be – yes. In this regard, it is respectfully submitted that such methodology is improper as provided in M.P.E.P. § 2141.03, which provides that a prior art reference must be considered in its entirety, *i.e.*, as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

Second, what is the basis of combining D'Amato and Rich where D'Amato pertains to printing and the benefits of printing whereas Rich pertains to embossing and the advantages of embossing? If anything, the combination of D'Amato and Rich would lead one of skill in the art to a less desirable holographic image as a result of printing (taught by D'Amato) Rich's metallic ink. In fact, such holographic image would include improperly impressed particles resulting in dull-appearing metallic ink.

Finally, the Examiner appears to be relying on the combination of D'Amato and Rich based on hindsight alone. In this regard, it should be noted that M.P.E.P. § 2142 provides that impermissible hindsight must be avoided and the legal conclusion must be reached on the

basis of the facts gleaned from the prior art.

While it is true that D'Amato teaches printing methods, D'Amato indeed does not teach printing of metallic inks. If the combination suggested by the Examiner were to really be studied, as provided hereinabove, the combination of D'Amato and Rich would lead one of skill in the art to a less desirable holographic image as a result of printing (taught by D'Amato) Rich's metallic ink (*i.e.*, not properly impressed particles thus deviating from Rich's goal in the excerpt provided hereinabove).

It is requested that the Examiner address the above points which show that a *prima facie* case of obviousness has not been established.

In addition to the various deficiencies of the combination of D'Amato and Rich, the Examiner's attention is now taken to the Interview Summary mailed on November 1, 2010. The Interview Summary shows that it was noted by the Examiner that "the different ink used in the present invention and the prior [art] of record". The Interview Summary also acknowledges review of "samples and Appendix 1-5". In this regard, it is respectfully submitted that the presently recited ink is different from Rich's ink. The foregoing is established hereinbelow.

As previously submitted on October 29, 2010, Samples A-C (actual samples produced by the Applicants) were left with the Examiner for his consideration after the Interview conducted on October 26, 2010. Sample A (Boswell method) is an example where metallic foil is hard embossed with a nickel shim. Sample B (Rich method) is an example of hard embossing an image into pre-printed metallic particle ink with a nickel shim. Sample C shows two examples, a conventional metallisation example where the holographic image has been fully vacuum metallised with aluminum and an example of the present claims, which the printed transferred holographic image has been overprinted with the specially formulated presently recited metallic pigment containing vacuum deposited metal pigment particles (hereinafter "VMP") ink.

The Boswell and Rich methods both rely on a conventional hard embossing technology to get the image in to the receptive medium (foil or ink). In the case of Rich's embossing method, the ink does not react in the same way as the present VMP ink. The present methods are in fact the reverse of this, *i.e.*, the clear UV is printed, the image is then transferred into it and then the VMP ink is then printed over it. The properties of the present VMP ink are such that it follows exactly the micro structure grating contours.

The above is evidenced in Samples A-C, which remain in the Examiner's possession for further review and consideration.

In view of at least the above, it is respectfully submitted that D'Amato and Rich, either alone or in combination, fail to disclose or suggest *all* features presently recited in independent claims 11, 64, and 66.

Accordingly, in light of at least the above discussion, it is respectfully submitted that a *prima facie* case of obviousness has not been established against the pending claims based on the cited art.

Even if it were assumed *arguendo* that a *prima facie* case of obviousness has been established in view of the cited art, a *prima facie* case of obviousness can be rebutted by a showing of unexpected results. (See, for example, *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963)). In this regard, it is respectfully submitted that the present Examples show that it has been unexpectedly found that high-quality holographic images can be produced in continuous (*i.e.*, in-line) processes that are highly efficient. (See, for example, pages 17-26 of the present specification). In particular, unlike conventional techniques which require a multi-stage manufacturing sequence with inherent difficulties including but not limited to inefficient use of resources resulting in wasted resources and high cost of the final product (*i.e.*, optically variable device "OVD"), the presently recited methods allow for manufacturing OVDs at speeds of about 18,000 meters per hour without requiring excessive heat or pressure. (See, for example, Pages 10-11 of the present specification). The results of the foregoing advantages of the presently recited methods are that the cost of making the present OVDs can be lower while providing high quality OVDs.

In view of at least the above, the obviousness rejections should be withdrawn.

Conclusion

The Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below if any issues remain in this matter, or if a discussion regarding any portion of the application is desired by the Examiner.

Respectfully submitted,

Law Office of Shruti Costales, PLLC

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By: /Shruti S Costales/
Shruti S. Costales
Registration No. 56,333

Customer No. 94799
Law Office of Shruti Costales, PLLC
Mailing Address:
2020 Pennsylvania Avenue NW
#310
Washington, DC 20006
Phone: (202) 480-6847
Email: Shruti@ShrutiLaw.com